SYSTEMS ENGINEERING REVIEW FORM

This form needs to be filled out for all ITS projects. For major all ITS projects, this completed form needs to be submitted to FHWA for review and approval prior to PE authorization (Phase 1 PE authorization).

For all major ITS projects, a System Engineering Management Plan (SEMP), which includes the seven items below, must be submitted to FHWA for review and approval prior to PE authorization for final or detailed design (Phase 2 PE authorization. The 2-phased authorization only applies to Major ITS projects.

For guidance in filling out the seven items below, see last part of this exhibit.

1. Identification of portions of the Regional ITS Architecture (RA) being implemented:
    _____
    _____
    _____
    _____

2. Identification of participating agencies roles and responsibilities:
    _____
    _____
    _____
    _____

3. Requirements definitions:
    _____
    _____
    _____
    _____

4. Analysis of alternative system configurations and technology options to meet requirements:
    _____
    _____
    _____
    _____

5. Procurement options:
    _____
    _____
    _____
    _____

6. Identification of applicable ITS standards and testing procedures:
    _____
    _____
    _____
    _____

7. Procedures and resources necessary for operations and management of the system:
    _____
    _____
    _____
    _____
    _____

Address the above items to the degree possible at Field Review stage and acknowledge commitment to address during system design in the early stages of the SE process.

1. Identification of portions of the RA being implemented:

    (Identify which user services; physical subsystems, information flows, and market packages are being completed as part of the project, and how these pieces are part of the RA.)

2. Identification of participating agencies roles and responsibilities (concept of operations):

    (For the user services to be implemented: define the high-level operations of the system, including where the system will be used; functions of the system capabilities; performance parameters; the life cycle of the system; and who will operate and maintain the system. Establish requirements or agreements on information sharing and traffic device control responsibilities. The RA Operational Concept is a good starting point for discussion.)

3. Requirements definitions:

    (Based on the concept of operations in 2. above, define the "what" and not "how" of the system. During early stages of the Systems Engineering [SE] process, they will be broken down into detailed requirements for eventual detailed design. The applicable high-level functional requirements from the RA are a good starting point for discussion. A review of the requirements by the project stakeholders is recommended.)

4. Analysis of alternative system configurations and technology options to meet requirements:

    (The analysis of system alternatives should outline the strengths and weaknesses, technical feasibility, institutional compatibility, and life cycle costs of each alternative. The project stakeholders should have input in choosing the preferred solution.)

5. Procurement options:

    (Some procurement [contracting] options to consider include: consultant design/low bid contractor, systems manager, systems integrator, task order, and design/build. Deciding on the best procurement option should consider the level of agency participation, compatibility with existing procurement methods, role of system integrator, and life cycle costs.)

6. Identification of applicable ITS standards and testing procedures:

    (Include documentation on which standards will be incorporated into the system design and justification for any applicable standards not incorporated. The standards report from the RA is a good starting point for discussion.)

7. Procedures and resources necessary for operations and management of the system:

    (In addition to the concept of operations in 2. above, document any internal policies or procedures necessary to recognize and incorporate the new system into their current operations and decision processes. Resources necessary to support continued operations, including staffing and training must also be recognized early and be provided. Such resources must also be provided to support necessary maintenance and upkeep to ensure continued system viability.)

(Attachment to Field Review Form)